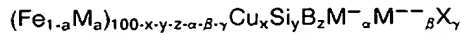


base soft magnetic alloy represented by the following general formula:



5 $0 \leq a \leq 0.5$

$0.1 \leq x \leq 3$

$0 \leq y \leq 30$

$0 \leq z \leq 25$

10 $0 \leq y + z \leq 35$

$0.1 \leq \alpha \leq 30$

$0 \leq \beta \leq 10$

$0 \leq \gamma \leq 10$

15 wherein M is one or two elements selected from Co and Ni, and M⁻ is one or more elements selected from Nb, W, Ta, Zr, Hf, Ti and Mo, M⁻⁻ is one or more elements selected from V, Cr, Mn, Al, platinum group metals, Sc, Y, rare earth elements, Au, Zn, Sn and Re, and X is one or more elements selected from C, Ge, P, Ga, Sb, In, Be and As and wherein at least 50% of the texture is composed of fine grains, and the grains have a maximum grain size of not more than 500 Angstroms.

12. The magnetic core according to claim 1, wherein said magnetic core is used in a large electric power.

20 13. The magnetic core according to claim 12, wherein said magnetic core is used in pulse generators.

14. The magnetic core according to claim 12, wherein said magnetic core is used in transformers.

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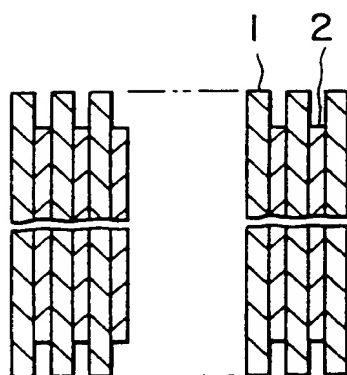


FIG. 1

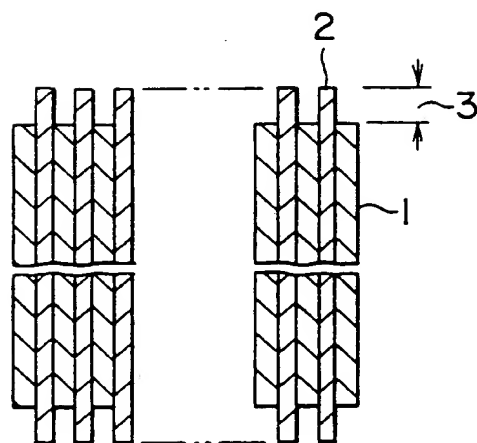


FIG. 2

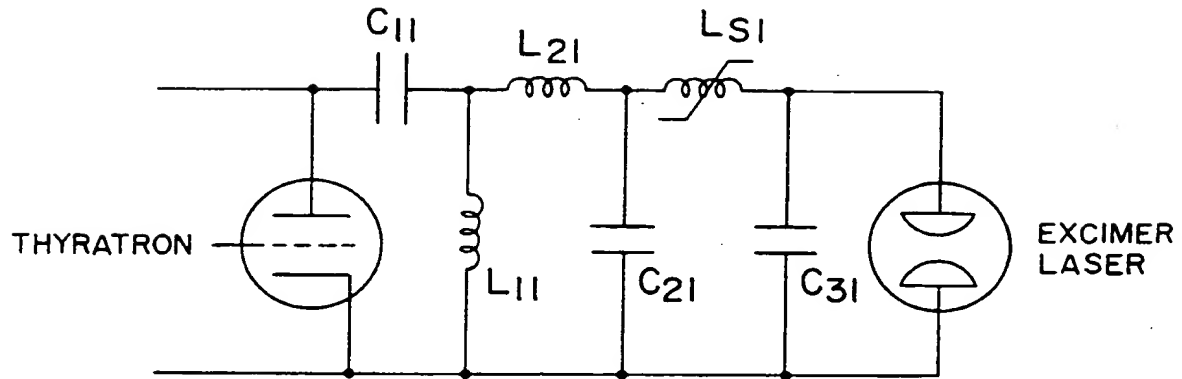


FIG. 3

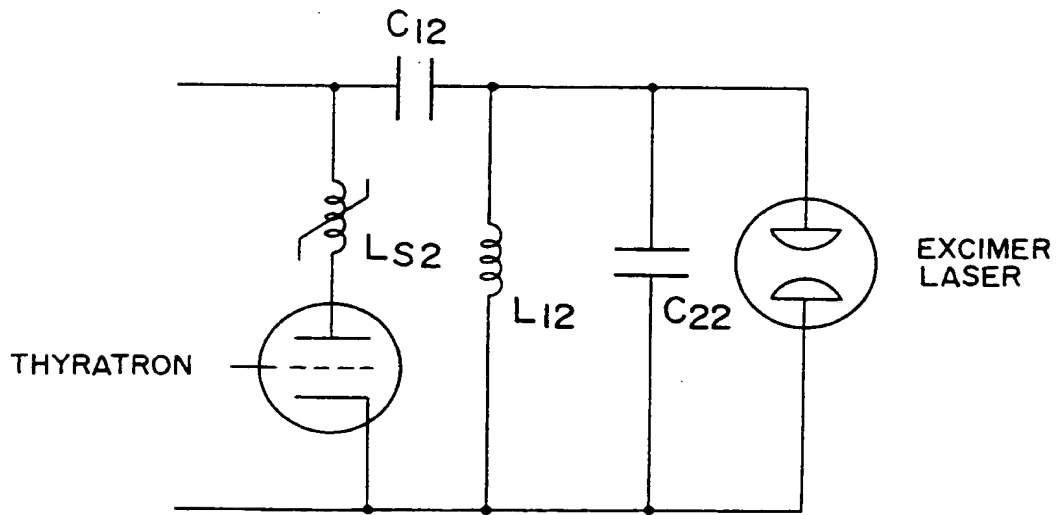
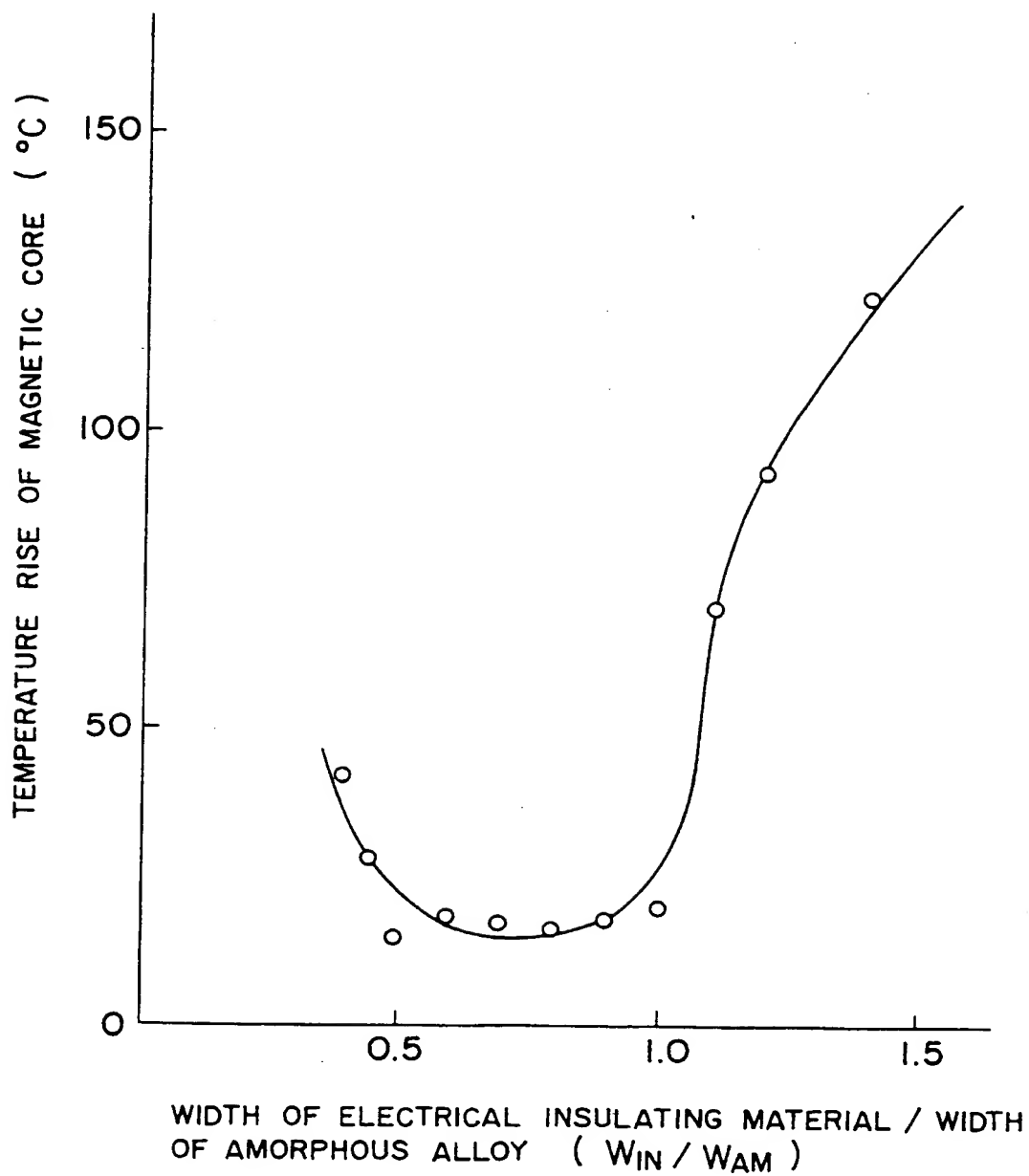


FIG. 4

**FIG. 5**

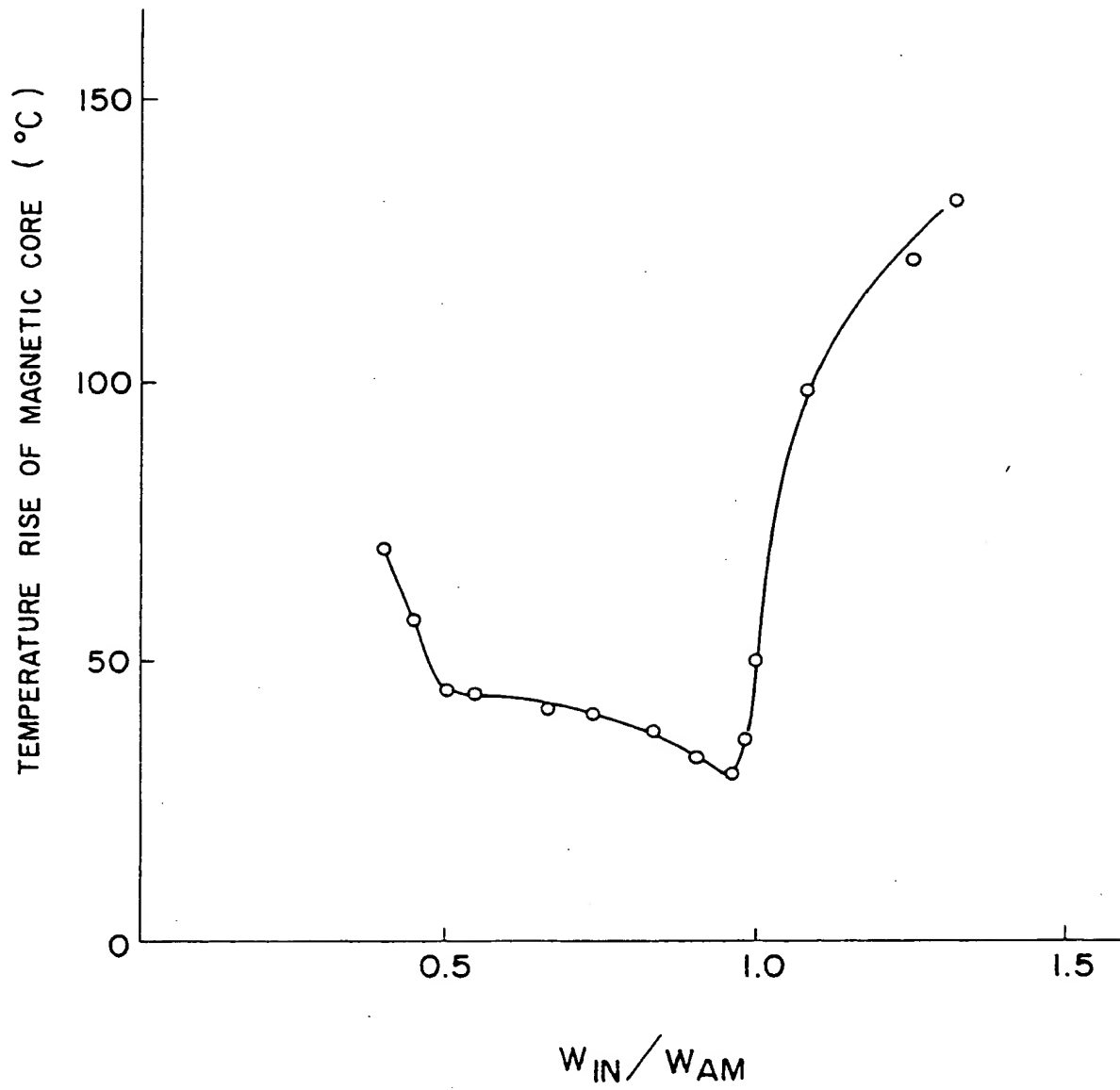


FIG. 6

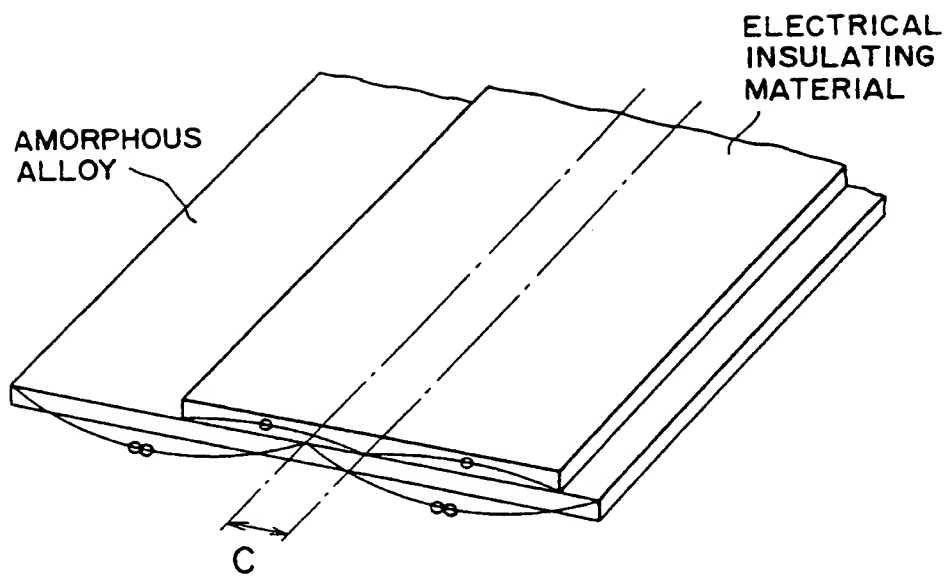


FIG. 7

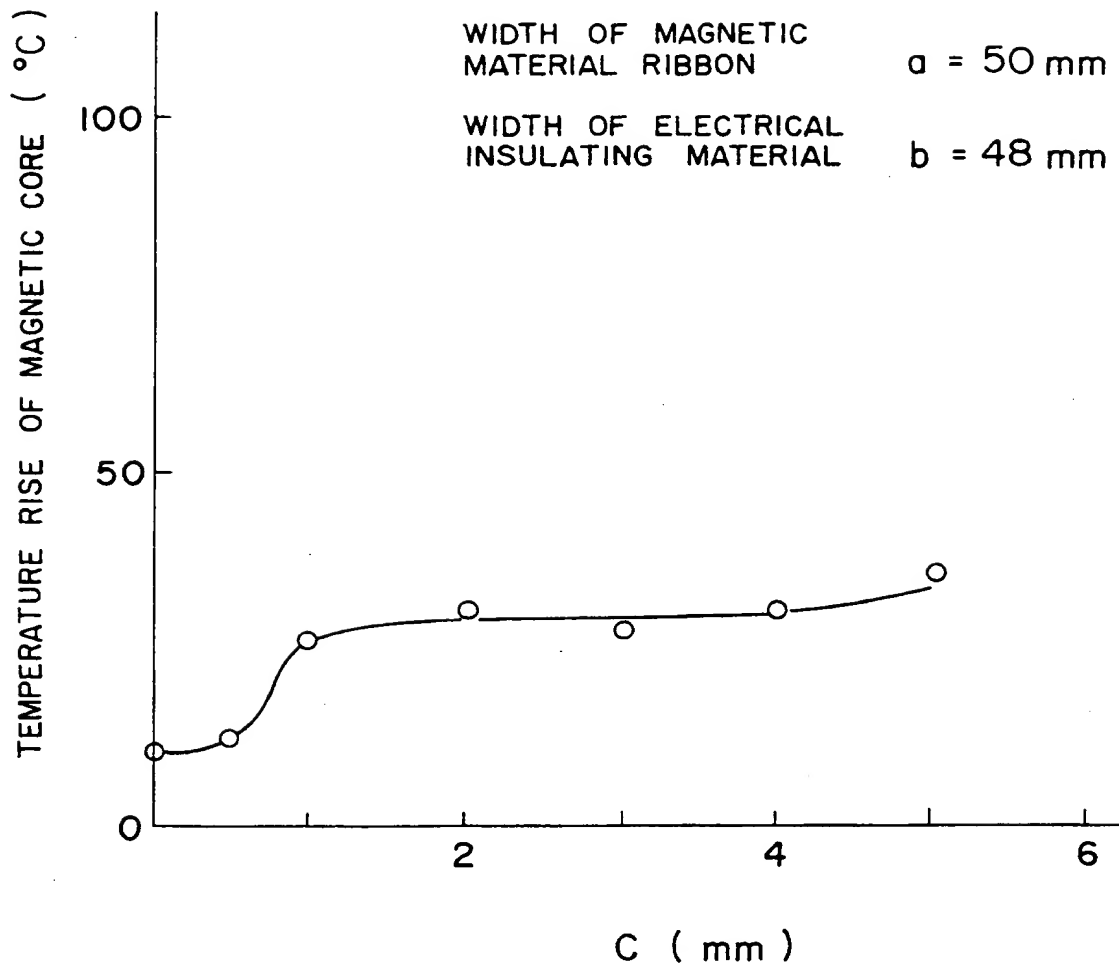


FIG. 8

INTERNATIONAL SEARCH REPORT

International Application No PCT/JP91/01294

| | | |
|---|---|---|
| I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) * | | |
| According to International Patent Classification (IPC) or to both National Classification and IPC | | |
| Int. Cl ⁵ H01F27/245, H01F3/02, H01F1/147 | | |
| II. FIELDS SEARCHED | | |
| Minimum Documentation Searched ⁷ | | |
| Classification System | Classification Symbols | |
| IPC | H01F1/14-1/18, 3/02, 27/24-27/245, 41/02 | |
| Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched ⁸ | | |
| Jitsuyo Shinan Koho | | 1926 - 1991 |
| Kokai Jitsuyo Shinan Koho | | 1971 - 1991 |
| III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹ | | |
| Category ⁹ | Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹² | Relevant to Claim No. ¹³ |
| X,Y | JP, A, 54-82027 (Mitsubishi Electric Corp.), June 29, 1979 (29. 06. 79), Upper part, right column to lower part, left column, page 2, Fig. 3 (Family: none) | 1-14 |
| E | JP, A, 3-124008 (TDK Corp.), May 27, 1991 (27. 05. 91), Page 3, Fig. 1 (Family: none) | 1-3 |
| Y | JP, A, 1-290746 (Toshiba Corp.), November 22, 1989 (22. 11. 89), Lower part, page 1 (Family: none) | 6-11 |
| Y | JP, A, 2-77555 (Toshiba Corp.), March 16, 1990 (16. 03. 90), Lower part, page 1 (Family: none) | 11 |
| <p>* Special categories of cited documents: ¹⁰</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p> | | |
| IV. CERTIFICATION | | |
| Date of the Actual Completion of the International Search | | Date of Mailing of this International Search Report |
| November 3, 1991 (03. 11. 91) | | November 25, 1991 (25. 11. 91) |
| International Searching Authority | | Signature of Authorized Officer |
| Japanese Patent Office | | |

Patent Abstracts of Japan

PUBLICATION NUMBER : 61073316
PUBLICATION DATE : 15-04-86

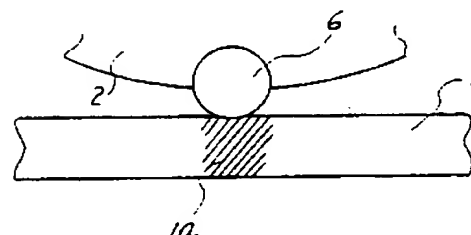
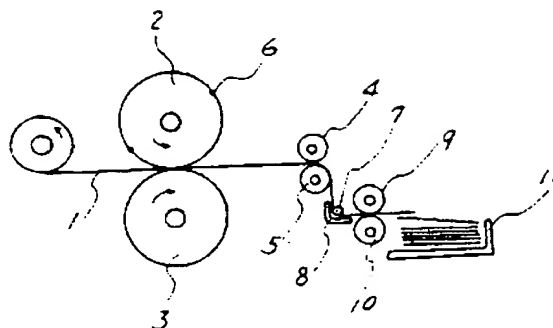
APPLICATION DATE : 18-09-84
APPLICATION NUMBER : 59193949

APPLICANT : TOSHIBA CORP;

INVENTOR : MURAKAMI, TSUGIO;

INT.CL. : H01F 41/02

TITLE : CUTTING METHOD OF AMORPHOUS
MAGNETIC THIN FILM



ABSTRACT : PURPOSE: To eliminate a problem such as the damage of a punching die even if many amorphous magnetic thin films are cut by embrittling the cut portions of the films and then applying an external force to break it.

CONSTITUTION: An amorphous magnetic thin film 1 wound in a roll shape is fed between rollers 2 and 3 to rollers 4, 5. Fine wire-shaped heater 6 is buried in the outer periphery of the roller 2 to heat the cut portion 1a of the film 1 to be embrittled. The film 1 is fed through the rollers 4, 5, between a roller 7 and a guide 8 to be bent and deformed to cut the embrittled portion 1a, and laminated through rollers 9, 10 in a stopper 11. Since the embrittled portion 1a is broken by applying an external force, a problem such as damage of a punching die can be eliminated.

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